

ABSTRACT OF THE DISCLOSURE

According to the present invention, there is provided a sample surface treating apparatus for processing a fine pattern by plasma etching,
5 ~~comprising~~ ^{including} a stage provided in a chamber, on which a sample to be subjected to a surface treatment is placed; etching gas ^{supply source} ~~supplying means~~ for continuously supplying an etching gas for plasma generation into
10 the chamber; ^a ~~plasma generating means~~ ^{generator} for generating a high-density plasma in the chamber; a bias power supply for applying a bias voltage of 100 kHz or higher to the stage independently of the plasma
15 ~~generation~~ ^a ~~and pulse modulating means~~ ^{modulator} for modulating the bias power supply at a frequency of 100 Hz to 10 kHz, wherein a surface treatment in which the minimum
~~feature size is 1 μm or smaller is performed to the~~ ^{on}
sample placed on the ~~stage~~ ^{stage}.